

Title (en)

POLYMERASE ENZYME SUBSTRATES WITH PROTEIN SHIELD

Title (de)

POLYMERASEENZYMESUBSTRATE MIT PROTEINABSCHIRMUNG

Title (fr)

SUBSTRATS D'ENZYMES POLYMÉRASES DOTÉS D'UN BOUCLIER PROTÉIQUE

Publication

EP 2814953 A4 20151028 (EN)

Application

EP 13749460 A 20130214

Priority

- US 201261599149 P 20120215
- US 2013026222 W 20130214

Abstract (en)

[origin: WO2013123258A1] Compositions and methods are provided for nucleotide analogs comprising protein shields for improving enzyme photostability in single molecule real time sequencing. Nucleotide analogs of the invention have a protein shield between the dye moieties and nucleotide moieties of the analog. The protein prevents the direct interaction of the dye moiety with the enzyme carrying out nucleotide synthesis preventing photodamage to the enzyme. The nucleotide analogs of the invention can have multiple dyes and multiple nucleotide moieties.

IPC 8 full level

C07H 19/00 (2006.01); **C07K 14/36** (2006.01); **C12M 1/38** (2006.01); **C12N 9/10** (2006.01); **C12N 15/54** (2006.01); **C12Q 1/68** (2006.01)

CPC (source: EP US)

C07H 19/06 (2013.01 - EP US); **C07H 19/16** (2013.01 - EP US); **C07H 21/04** (2013.01 - EP US); **C07K 14/36** (2013.01 - EP US); **C09B 23/083** (2013.01 - EP US); **C09B 69/105** (2013.01 - EP US); **C12N 9/10** (2013.01 - EP US); **C12Q 1/6869** (2013.01 - EP US); **C12Q 1/6874** (2013.01 - EP US); **G01N 33/582** (2013.01 - US); **G01N 33/583** (2013.01 - US); **C12Q 2523/313** (2013.01 - US); **C12Q 2535/113** (2013.01 - EP US); **C12Q 2563/107** (2013.01 - US); **C12Q 2563/131** (2013.01 - US)

C-Set (source: EP US)

1. **C12Q 1/6874** + **C12Q 2523/313** + **C12Q 2563/107** + **C12Q 2563/131**
2. **C12Q 1/6869** + **C12Q 2535/113** + **C12Q 2563/107**

Citation (search report)

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- [A] WO 03083435 A2 20031009 - NUGEN TECHNOLOGIES INC [US], et al
- [E] WO 2013044018 A1 20130328 - ILLUMINA INC [US], et al
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DOCDB simple family (application)

US 2013026222 W 20130214; EP 13749460 A 20130214; EP 17165469 A 20130214; EP 19182978 A 20130214; US 201313767619 A 20130214; US 201514727553 A 20150601; US 201816012428 A 20180619; US 202117230007 A 20210414; US 202318125072 A 20230322